



THE CITY OF SAN DIEGO

Recycled Water

Use in San Diego



Recycled Water Use in San Diego

Recycled Water Makes Sense for San Diego

In San Diego, water is too precious a resource to use just once. A safe, dependable water supply is vital to our economy and quality of life. San Diego currently imports up to 90 percent of its water supply from Northern California and the Colorado River.

To meet future water demands and avoid shortages, while reducing our dependence on imported water, the City of San Diego has built the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. These plants treat wastewater to a level suitable for irrigation, manufacturing and other non-drinking, or non-potable purposes. The North City Plant has the capability to treat 30 million gallons a day and the South Bay Plant can treat 15 million gallons a day. Recycled water (also referred to as reclaimed water) gives San Diego a dependable, year-round, locally controlled water resource. Using recycled water is cost-effective, reliable and good for the environment.



About the City of San Diego Water Department



The City of San Diego Water Department is committed to providing our customers with safe, high-quality, reliable water service. Through the use of long-range planning, innovative cost-saving measures and cutting-edge technology, the Water Department is working to ensure safe, reliable service for generations to come.

**For more information about the City of San Diego
Recycled Water program, please call (619) 533-7485
Visit our website at:
www.sandiego.gov/water/recycled**

Recycled Water Uses

Landscape irrigation is the single largest use for recycled water within the City of San Diego. Recycled water is also used for industrial processes, cooling towers, soil compaction, dust suppression, circuit board washing and toilet and urinal flushing.

The City is currently working with businesses, public agencies, homeowners associations, and academic institutions with proximity to the optimized system to retrofit their properties and educate them on the use of recycled water.

Many customers are already using recycled water. Some of these customers include General Atomics, Motorola, CalTrans, UCSD, Torrey Pines Municipal Golf Course, Nissan Design, Burnham Institute, Metro Biosolids, Miramar Landfill, and the City of Poway.



Rules and Regulations

The State of California Department of Health Services sets the standards for required levels of treatment and types of uses for recycled water. These standards are included in the California Code of Regulations, Title 22.

There are extensive rules and regulations covering its usage. These include proper signage and making sure all pipes, sprinkler heads, meter boxes and other irrigation equipment are properly marked or color-coded purple to distinguish them from potable supplies and avoid any potential for cross-connections. The Water Department will work with customers to ensure they are in compliance with all State and local health regulations.

Approved uses include irrigation of food crops, parks, playgrounds, school yards, residential landscaping, common areas, nurseries, freeway landscaping, golf courses, pastures for animals and wetland projects. Additional approved uses are for recreational water bodies including fishing, boating, fish hatcheries, and for industrial processing, commercial laundries and soil compaction.

To obtain a copy of *"Rules and Regulations for Recycled Water Use and Distribution within the City of San Diego,"* Call the City's Development Services Department, Publications Section, at (619) 446-5100 or visit their office on the second floor of the Development Services Center, 1222 First Avenue, San Diego. For more information about the Recycled Water Program, please call **(619) 533-7485.**



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Quality and Safety

Recycled water is approved for nearly all uses except drinking. Careful monitoring by responsible local health and water quality control agencies ensures that the City of San Diego produces a high quality water product that meets all federal, state and local water quality standards. According to the strict standards set out in Title 22 of the California Code of Regulations, recycled water is safe for all human contact. For more than 30 years, recycled water has been safely used throughout the country in recreational lakes, sprinkler systems for homes and businesses, for crop irrigation and manufacturing processes. Since recycled water is used for non-drinking purposes, a separate set of distribution pipelines has been built to deliver water from the North City Water Reclamation Plant and the South Bay Water Reclamation Plant to customers.



Typical Recycled Water Treatment Process:

From Original use to Ultimate Reuse.



Sewer drains carry wastewater from our homes and businesses to the treatment plant.

BAR SCREEN

The wastewater is first sent through a screen that collects and removes large debris.

GRIT CHAMBER

In the grit chamber heavy debris, such as sand, settle to the bottom of the tank where it is removed.

DEBRIS

PRIMARY CLARIFIER

In primary treatment, heavy particles such as dirt sink to the bottom of large tanks and are removed.

OXYGEN

AERATION TANKS

In the aeration tanks, waste water is mixed with oxygen to create an environment for bacteria to decompose organic pollutants.

SLUDGE

SECONDARY CLARIFIER

During the secondary treatment phase, bacteria is added to organically rid the water of harmful pollutants. The remaining waste is removed as sludge for reuse as fertilizer.

TERTIARY FILTERS

Then the water trickles through anthracite coal filters to remove remaining wastes.

CHLORINE CONTACT BASIN

At this stage, filtered water will be disinfected to kill any remaining harmful bacteria.

The water is now available for irrigation and industrial uses.

How to Sign up for Recycled Water Service and \$ave

The City of San Diego Water Department has a staff of recycled water experts available to work with customers on retrofitting their properties. Once a customer begins service, the cost of recycled water is significantly less than the potable water rate. The cost for recycled water is .80 cents per hundred cubic feet (HCF) of water, which is equal to 748 gallons. This is a tremendous deal when compared to the potable rate for businesses which is about \$1.57 per HCF. If you would like to find out how to sign up for recycled water service, call (619) 533-7557.

Eight Easy Steps to Use Recycled Water

1. Conduct Site Assessment

The Water Department cross-connection staff will review customer's preliminary site assessment and list of requirements that need to be met in order for property to accept recycled water.

2. Sign User Agreement/Letter of Intent

The customer signs User Agreement or Letter of Intent to commit the City to provide recycled water and the customer to use recycled water. The recycled water will be used under all Water Department Rules and Regulations for Recycled Water.

3. Prepare Retrofit Design

Customer or authorized representative prepares design to retrofit site according to the State and County health regulations.

4. Design Review and Plan Check

The customer or authorized representative submits preliminary design including site assessment report to the City for review. A conceptual drawing of the customer's site is required for approval by the County Department of Environmental Health. Also, the customer is required to complete design plan check process and pay appropriate fees.



5. Retrofit Property

The customer or authorized representative performs retrofit work on site.

6. Test System

Upon completion of the retrofit work, a cross-connection test by the City and the contractor will be performed with final approval of retrofit work by the County Department of Environmental Health.

7. Meter/Service Installation

After the customer pays fees based on the size of the recycled water meter the City then processes and schedules installation. The City notifies customer prior to distributing water and sets meter.

8. Train Staff

Irrigation Supervisor attends the Recycled Water Certification Workshop sponsored by the San Diego County Water Authority. The customer receives water and enjoys the benefits and cost savings of using recycled water.



Recycled Water Site Supervisor Certification Workshop



This one-day certified course is designed to provide irrigation supervisors with a basic understanding of recycled water and how to operate and maintain a safe, efficient operation. Understanding similarities and differences between recycled and potable water is critical to the successful operation of a recycled water system.

The class, sponsored by the San Diego County Water Authority, costs \$35 per person. Fee includes materials, continental breakfast and lunch.

Topics covered in this class include the following:

- *What is a recycled water site supervisor?*
- *Introduction to recycled water use*
- *Guidelines for recycled water use water management techniques*
- *Cross connection control backflow testing*
- *Common problems/Recommended solutions*

For dates and times of upcoming classes or additional information call the County Water Authority at 858-522-6756.

Guaranteed Water Program



The Guaranteed Water Program exempts research and development or industrial manufacturing firms from mandatory water restrictions in times of drought in exchange for their participation in daily water conservation programs, including the use of recycled water.

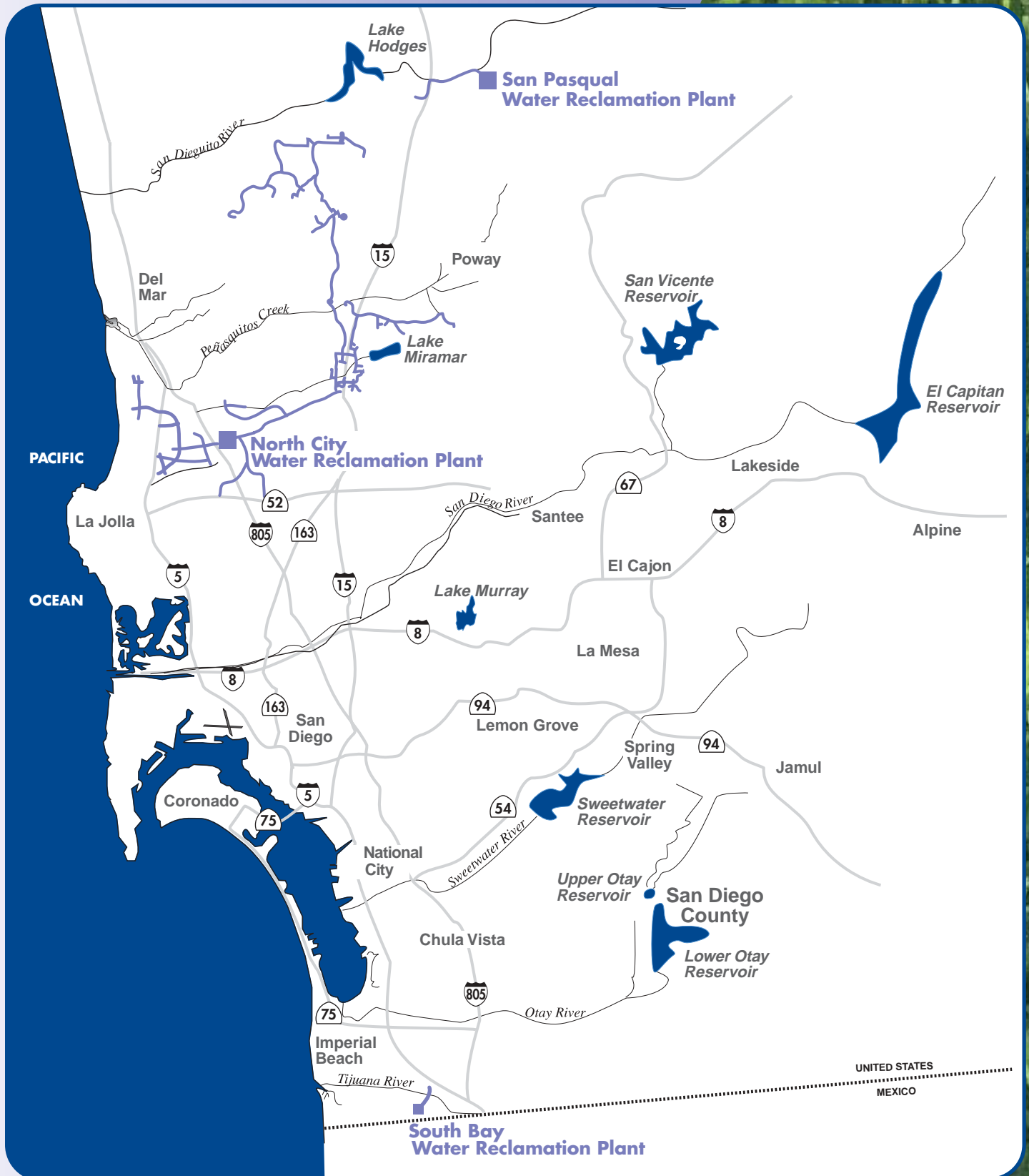
To qualify, a company must use recycled water where feasible, install ultra low-flow toilets, water-conserving showerheads and other water-efficient fixtures. Once this is done, the business is exempt from mandatory water supply cuts during a Water Warning when other businesses are being required to conserve water.

According to **San Diego Municipal Code 67.3806(d)**, a Water Warning occurs when the Water Department is not able to meet the demands of its customers. Upon implementation, local businesses are required to conserve water while businesses under the Guaranteed Water Program are exempt from mandatory cutbacks.

To participate in the City's Guaranteed Water Program, please call (619) 533-4243



Recycled Water Distribution System



Visit our website at: www.sandiego.gov/water/recycled